



Robins Air Force Base Environmental Advisory Board (EAB)



Fact Sheet

Volume 8, Issue 1, August 2013

The Robins AFB EAB

Recognizing the importance of public involvement in environmental matters, Robins Air Force Base (Robins AFB) has established the Environmental Advisory Board (EAB). The mission of the EAB is to encourage participation of surrounding communities in the Base's environmental programs and allow community members and other stakeholders to have meaningful dialog with Base officials. Specifically, the EAB serves to promote community awareness and obtain constructive community review, comment, and input on current and proposed actions associated with environmental programs at Robins AFB. The EAB supports the Air Force environmental mission of sustaining readiness, being a good neighbor, protecting human health and the environment for the Base and community, and making smart business decisions.

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August 2013 EAB Meeting

The summer EAB meeting was held on Thursday, August 1, 2013. EAB members met at the Warner Robins City Hall in Warner Robins, Georgia, where they boarded a bus to tour the biosparge system at Solid Waste Management Units (SWMUs) 59 and 60 and the Qualified Recycling Program (QRP) Center.

This *Fact Sheet* provides a summary of the information and topics discussed during the tour.

The next meeting will also be a tour at the Base on Thursday, November 7, 2013.

EAB MEMBERS TOUR BIOSPARGE SYSTEM AT SWMUs 59 AND 60

Contamination at SWMUs 59 and 60 resulted from the release of jet fuel from a pipeline that runs parallel to the flightline taxiways. Under the Performance Based Remediation (PBR) Contract, the remedy for both sites has been optimized with installation of a biosparge system.

During the summer EAB meeting, **Mr. Tom Kessler** and **Mr. Adrian Teal** from CH2M Hill gave the EAB members a tour of the system, which began operation in December 2012.



Mr. Tom Kessler of CH2M Hill gives the EAB members an overview of the biosparge system recently installed at SWMUs 59 and 60.

Biosparging involves the low flow injection [about 0.25 to 1 standard cubic foot per minute (scfm) of well screen] of atmospheric air to stimulate the aerobic biodegradation of hydrocarbons (e.g., jet fuel).

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EAB MEMBERS TOUR BIOSPARGE SYSTEM AT SWMUs 59 AND 60 (Cont'd)

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The objectives for the system are to: (i) reduce dissolved hydrocarbon concentrations to drinking water standards at SWMUs 59 and 60; (ii) reduce hydrocarbon concentrations in soil at SWMU 59; and (iii) achieve site closeout at both sites by 2016.

The biosparge well network consists of 50 vertical wells and five horizontal wells. The vertical wells were installed as Air Sparge (AS) wells, as part of the original remedial action plan for the site. They are 40 feet deep with five feet of screen. Air is injected into each well at five scfm with 11 pounds per square inch (psi) of pressure. Air is injected for six hours and then the system is off for three hours; the on/off cycle repeats continuously.

The horizontal wells were drilled at an angle using horizontal directional drilling (HDD) technology. The wells are approximately 1,200 feet long and have 540 to 850 feet of screen. The screen is positioned 50 to 70 feet below ground surface (ft bgs). Air is injected continuously into each well at 135 to 280 scfm with 14 psi of pressure.

The controls for the system components are located in a fenced area about 100 feet southwest of the Base's control tower. The major components of the vertical system include blowers/heat exchangers and an air distribution manifold and control panel for the SWMU 60 wells. For the horizontal system, the major components include an air compressor, an after-cooler, a receiving tank, and a manifold building. Aboveground components located outside the fenced area include well vaults and the SWMU 59 air distribution manifold

The system is monitored on a weekly, monthly, and quarterly basis for various parameters. Based on data from groundwater samples from the site, there has been a considerable decrease in the size

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EAB members brave the rain to see the vaults for the horizontal wells at SWMU 60.



View inside the biosparge equipment compound. The manifolds for each of the five horizontal wells can be seen on the right of the photograph.



Drill rig set-up for HDD wells in flightline area.

QRP HIGHLIGHTED DURING EAB TOUR

The Robins AFB Solid Waste Program manages non-hazardous solid waste generation, recycling, and disposal at the Base. One key goal of the Program is to divert the solid waste generated on the Base from the landfill through the QRP. During the summer meeting, the EAB members were given a tour of the QRP Center by **Mr. Randy Stillwell** and **Mr. Darryl Mercer** of Robins AFB.



The QRP Center is located centrally on the Base south of Duck Lake and just west of Warner Robins Street.



EAB members are given an overview of the QRP during the summer EAB meeting.

The Center was opened in 2010, and is centrally located on the Base, south of Duck Lake and just west of Warner Robins Street. Anyone with access to the Base is allowed to bring recyclable material to the Center, which is open 24 hours a day, seven days a week.

The main types of items collected for recycling include paper, plastic bottles, glass, aluminum cans, and toner cartridges. The Base teams with Happy Hour, who comes to the Base three times a week to collect the materials. A portion of the proceeds from Happy Hour's sale of the material is provided back to the base to put into the QRP fund. In 2012, the program had net proceeds of over \$250,000.

Future plans for the QRP Center include installing a concrete pad near the back of the facility to allow for increased operational space and purchasing a bailer to bail aluminum cans and plastic bottles. The bailing of these materials will reduce the number of service trips that Happy Hour has to make to the Base each week. There are also future plans to consolidate the scrap metal yard at Building 1555.



Recyclables are dropped off at the center and placed through the windows (top photograph) into bins (bottom photograph) for Happy Hour to collect.

EAB MEMBERS TOUR BIOSPARGE SYSTEM AT SWMUs 59 AND 60 (Cont'd)

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of the groundwater contaminant plumes at SWMUs 59 and 60 since the startup of the system

(50 and 60 percent reduction, respectively). Contaminant of concern (COC) concentrations have decreased by an average of 70 percent.

The biosparge system will operate until site COCs in groundwater are below Maximum Contaminant Levels (MCLs). Following achievement of MCLs,

groundwater concentrations for the site COCs must remain below MCLs for three years prior to site closeout.

Interesting Facts about the Horizontal Biosparge System

- ◇ Horizontal wells were installed using a single entry (blind end).
- ◇ The head of the horizontal drill bit was tracked to an accuracy of less than 1 foot using radio frequency equipment.
- ◇ Two miles of pipe sections were installed to convey air to the wells.
- ◇ 1.7 million cubic feet of air is injected per day, which is enough air to fill eight blimps.
- ◇ The length of the well screens and capacity of the air compressor make this horizontal system one of the largest in the country, if not the world.

Acronyms

AFB	Air Force Base
AS	Air Sparge
COC	Contaminants of Concern
EAB	Environmental Advisory Board
ft bgs	feet below ground surface
HDD	Horizontal Directional Drilling
MCL	Maximum Contaminant Levels
QRP	Qualified Recycling Program
PBR	Performance-Based Remediation
psi	pounds per square inch
scfm	standard cubic feet per minute
SWMU	Solid Waste Management Unit

For more information regarding the EAB, please contact
Ms. Charline Logue, Robins AFB EAB Manager, at (478) 327-9268
 or visit <http://www.robinseab.org>

Environmental Advisory Board Members

Mr. Alexander Stokes, Robins AFB Installation Co-Chair	Dr. Dan Callahan, Warner Robins Community Member	Ms. Debra Jones, Warner Robins Community Member	Mr. Don Thompson, Macon Community Member
Dr. Brian E. Rood, Macon Community Co-Chair	Mr. James Harden, Warner Robins Community Member	Mr. Mike Maffeo, Macon Community Member	Mr. Penrose Wolf, Perry Community Member
Ms. Lila Llamas, US EPA Region 4 Hazardous Waste Division	Mr. John Harley, Centerville Community Member	Dr. Linda Smyth, Macon Community Co-Chair	
Ms. Mary Brown, GA EPD Hazardous Waste Management	Mr. Stephen Johnson, Macon Community Member	Dr. Joseph Swartwout, Fort Valley Community Member	